EHRLICHIOSIS

Ehrlichiosis is an acute, febrile bacterial illness caused by microorganisms called rickettsiae that are transmitted to humans by a tick bite. The symptoms are often non-specific with the most common complaints being fever, headache, myalgia, anorexia, nausea, and vomiting. The illness ranges from mild to life threatening.

Two types are recognized in the United States:
?? HME—Human Monocytic Ehrlichiosis—*Ehrlichia chaffeensis*
?? HGE—Human Granulocytic Ehrlichiosis—probably *E. phagocytophilia* and *E. equi*

Laboratory Criteria for Confirmation:
?? Fourfold or greater change in antibody titer to *Ehrlichia* spp. antigen by immunoflourescence antibody (IFA) test in acute and convalescent specimens ideally taken four weeks or more apart. HME diagnosis requires the use of *E. chaffeensis* antigen and HGE currently requires *E. equi* or HGE-antigen; **OR**
?? Positive polymerase chain reaction (PCR) assay. Distinct primers are used for the diagnosis of HGE and HME; **OR**
?? Intracytoplasmic morulae (inclusions) identified in blood, bone marrow, or CSF leukocytes **and** an IFA antibody titer ? 1:64.

Case Classification

Confirmed: A clinically compatible case that is laboratory confirmed.
Probable: A clinically compatible case with either a single IFA serologic titer ?64 or intracytoplasmic morulae identified in blood, bone marrow, or CSF leukocytes.

Epidemiology

2001
Three cases were reported from 2 different districts (Pennyrile and Barren River Districts), all 3 cases were in males and all were over 55 years of age. Two cases were HME and one case was unspecified.

The Lone Star tick (*Amblyomma americanum)* and the American Dog tick (*Dermacentor variabilis)*, both found in Kentucky, are the vectors for HME, the type of Ehrlichiosis usually diagnosed in the southeastern states.

Incomplete testing is the primary reason cases cannot be confirmed. A convalescent sample, frequently not submitted for testing, is necessary for confirmation.